Auto Lift and Lower

This kit can be retro fitted to any machine that is run on an Apollo tank

Kit # 6358-01-99
TOW-BEHIND TANK CONFIGURATION

LIFT/LOWER DIRECTIONAL SOLENOID VALVE
- Remove old coil by removing retaining nut on end & replace with new 3441-24-04 with Deutsch connector
- Connect end of 3151-65 harness to coil then connect other end to whisker & dirty power leads on main trunk harness near the middle of the drill

AUXILIARY HARNESS ON MASTER ECU
- Insert wire from 3151-63 harness into pin 13 of connector in aux port of ECU
- Connect other end of 3151-63 harness to whisker lead on main trunk harness near ECU

WHISKER & DIRTY POWER LEADS

TILLAGE UNIT

LEADING TANK CONFIGURATION

LIFT/LOWER DIRECTIONAL SOLENOID VALVE
- Remove old coil by removing retaining nut on end & replace with new 3441-24-04 with Deutsch connector
- Connect end of 3151-65 harness to coil then connect other end to whisker & dirty power leads on main trunk harness near the middle of the drill

AUXILIARY HARNESS ON MASTER ECU
- Insert wire from 3151-63 harness into pin 13 of connector in aux port of ECU
- Connect other end of 3151-63 harness to whisker lead on main trunk harness near ECU

WHISKER LEAD

WHISKER & DIRTY POWER LEADS

AIR SEEDER TANK

TILLAGE UNIT

NOTE: 1) For leading tank configurations without any ECUs on the drill, plug the 3151-65 harness in near the ECU on the tank. Plug the dirty power into the main trunk harness but the whisker into the 3151-63 harness using the 3151-84 adapter then route to the rear hitch. Use the 3132-84 extension harness to extend from the hitch to the lift/lower solenoid.
2) Splitter harness 3132-90 is also included in case the dirty power lead is already used for something else.
When the kit is ordered this is what should be found, not all the harnesses are used on each machine.

0252-01-09 : INSTR RETRO LIFT/LWR X30 APLO

3151-65 : HARN LIFT/LWR X30 APLO

3151-63 : HARN RETRO LIFT/LWR X30 APLO

3151-64 : HARN GENDER CHANGE 2WIRE M DEU

3132-64 : HARN EXT 20FT 2WIRE M/F only used on leading tank when no Blockage or ASC are present.

3132-90 : HARN ADPTR DEU 4PIN DTP only used it tank is equipped with NH3 or Liquid or plug already being used.

3441-24-04 : COIL 12V DEU D05 VLV
**X30 RAISE / LOWER USE**

**DRILL HARNESS CONNECTIONS FOR THE X30 TO RAISE / LOWER THE DRILL**

- **Connected**
  - Need to receive signal from the ECU to raise / lower the drill.

- **Not Connected**
  - Do not need signal from the 410 box

- **Connected**
  - Need to provide power to the relay and in-turn power the raise / lower solenoid.
Instructions For Tow Behind and Leading Tank with ECUs on the Drill Configuration

LIFT/LOWER DIRECTIONAL SOLENOID VALVE
- REMOVE OLD COIL BY REMOVING RETAINING NUT ON END & REPLACE WITH NEW 3441-24-04 WITH DEUTSCH CONNECTOR
Connect deutsch end of 3151-65 harness to the coil leaving the two pin weatherpack connector capped as it is not needed.

Note: If the weatherpack connector is hooked to the main drill control harness you will receive a Overcurrent alarm on the X30
The other end of 3151-65 plugs into the Whisker and the Dirty power leads on the main harness. Near the middle of the drill.
CM40 Master ECU. Closest ECU to the tank wall. Find the AUX plug and pin 13. Remove the white plastic plug and insert the wire from 3151-63.

AUXILIARY HARNESS ON MASTER ECU
- Insert wire from 3151-63 harness into pin 13 of connector in AUX port of ECU
- Connect other end of 3151-63 harness to whisker lead on main trunk harness near ECU
- Skip the rest and go to the setup of the X30

Hooks to whisker Lead
On the tank
Leading Tank without any ECU’s on the drill.

- FOR LEADING TANK CONFIGURATIONS WITHOUT ANY ECU'S ON THE DRILL, INSERT WIRE FROM 3151-63 HARNESS INTO PIN 13 OF CONNECTOR IN AUX PORT OF ECU.
- THE WHISKER END OF THE 3151-63 PLUGS INTO THE EXTENSION HARNESS 3151-64 AND THEN CONNECTS TO THE WHISKER PLUG ON THE 3151-65
- PLUG THE DIRTY POWER CONNECTOR ON 3151-65 INTO THE MAIN TRUNK HARNESS
- THEN ROUTE THE REST OF THE 3151-65 TO THE REAR HITCH OF THE TANK
- AT THE REAR HITCH CONNECT THE LIFT SOLENOID PLUG ON THE 3151-65 TO THE 3132-65 EXTENSION HARNESS.
- HOOK THE OTHER END OF THE 3132-64 TO THE LIFT LOWER SOLENOID ON THE DRILL.

CONNECTS TO THE LIFT LOWER SOLENOID
LIFT/LOWER DIRECTIONAL SOLENOID VALVE
- REMOVE OLD COIL BY REMOVING RETAINING NUT ON END & REPLACE WITH NEW 3441-24-04 WITH DEUTSCH CONNECTOR THEN CONNECT THE 3132-64 HARNESS
SPLITTER HARNESS 3132-90 IS ALSO INCLUDED IN CASE THE DIRTY POWER LEAD IS ALREADY USED FOR SOMETHING ELSE.
1. **Drill Control** - set to enabled to allow control of the drill Lift Master (Lift/Lower) through the X30.

2. **Lower Time** - amount of time drill will start lowering prior to reaching unseeded ground. Measure how long it takes drill to lower and use this time to ensure all openers are in ground for unseeded area.

**NOTE:** If Drill Control is enabled do not use implement switch as the master or as secondary master.
Note
Lift Master (Lift/Lower) can be used to automatically raise and lower the openers with the use of ASC. If ASC is ON and the Drill Control Boom is enabled, the openers will raise and lower automatically when going over coverage on the map.

Select the Lift Master button to lift and lower the drill

Turn the track master on or off to set whether the Lift Master (Lift/Lower) state will track the master state or not.

• If turned on then the drill position will follow master switch state.
• If the master is on, the drill will be lowered, unless the drill is manually lifted.
• If the master is off, the drill will be lifted.
• If turned off then drill position is independent of master switch state.

Note
The main purpose of enabling track master is so the drill lifts when the master switch is manually turned off and the drill lowers when the master switch is manually turned on.